

# Cultural control of Diplodia cob rot in maize

## Recognize the problem

Diplodia maize cob rot (also called ear rot) is a disease caused by a fungus. It causes rotting of the grains on the mature maize cob, reducing yield by up to 80%. The fungus turns the grains brown, and whitish threads can also be seen. Other cob rot diseases cause reddish, blackish or greyish grains and maize smut disease causes big deformed cob parts. Cob rot fungi can produce poisonous chemicals in the grains which may lead to death if eaten. It is therefore important that people do not eat infected maize and do not feed it to livestock.

## Background

Diplodia is known to be more dangerous when there is rainfall after the maize cobs have matured. Water gets inside the cob cover which allows the fungus to attack the maize grains. Cultural practices which reduce the water getting inside the cob covers reduce Diplodia cob rot. In addition, varieties with grain types that prevent or slow down the spread of the fungus can be used.

## Management

Several cultural methods can be used for controlling cob rots:

- Avoid delays in harvesting maize from the field once it is ready for harvest. This shortens the attacking period of this fungus. Harvest the maize before it starts shelling on its own, i.e. when it is at about 15 % moisture content.
- Avoid planting short-maturing varieties (3 month varieties), for example MM 441 or ZMS 402, in longer season areas such as the Northern part of Zambia (whose season takes 5 to 6 months). These varieties will mature when it's still raining.
- Use maize varieties such as MRI 634 whose cobs are completely closed with covers at maturity as opposed to those which open.
- Varieties that face down at maturity such as MRI 624 are less likely to be attacked than those which remain upright
- Crop rotation can also be used and soybean is good crop to interchange with maize on the same piece of land

Search for brown grains or whitish threads on maize cob in the field. (Photo by Langa Tembo, UNZA)



Infected cobs showing browning of grains and whitish threads. (Photo by Bradley Flett)



Scientific name(s) > *Stenocarpella maydis* (formerly *Diplodia maydis* or *D. zeae*)

The recommendations in this factsheet are relevant to: Zambia



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